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I. *Conjectures on the Charming or Fascinating Power attributed to the Rattle-Snake: grounded on credible Accounts, Experiments and Observations.* By Sir Hans Sloane, Bart. President of the Royal Society, and College of Physicians, &c.

TH E various Relations not only of curious and credible Authors, who have given us Accounts of *Virginia*, *Carolina*, and the neighbouring Countries, but also the Testimonies of several Men of Integrity by word of Mouth, concerning what they call Charms, Inchantments or Fascinations by Snakes, have often seemed to me greatly surprizing, without my being able to satisfy myself of the true Cause of such Appearances.

These Opinions are the greatest Support of a common Notion, that several chronical wasting Diseases, and such Disorders of the Nerves as are not easily accounted for, not only in Men, but in Cattle, are believed to be the Effects of an evil Eye of old malicious Women, &c. thought to be Witches and Sorcerers, or assisted by the Devil.

In particular as to *Rattle-Snakes*, they all agree in their Relations, that those Snakes keeping their Eyes fix'd on any small Animal, as a Squirrel, Bird, or such like, though sitting upon the Branch of a Tree of a considerable Height, shall, by such stedfast or earnest Looking, make or cause it to fall dead into their

Mouths. This is a Thing so well attested, that they think there is no reason to question their belief of it.

Mr. *Read*, an eminent Merchant in the City of *London*, had a *Rattle-Snake* sent him alive in a Box with some Gravel from *Virginia*, which he did me the Favour to give me. It had lived three Months before without any Sustenance, and had in that time parted with its outer Coat or *Exuviae*, which was found amongst the Gravel. Mr. *Ranby*, a very ingenious Surgeon and Anatomist, undertook the lodging it: And Captain *Hall*, a very understanding and observant Person, who had lived many Years in that Country in great Repute, ventured to take the Snake out of the Box; notwithstanding that the Poision from the Bite thereof is almost present Death: For he gave us an Instance of a Person bitten, who was found dead at the Return of a Messenger going to the next House to fetch a Remedy or Antidote, though he was not gone above half an Hour. Nay, so certain are the mortal Effects of this Poison, that sometimes the waiting 'till an Iron can be heated, in order to burn the Wound, is said to have proved fatal. This Gentleman told me he thought the securest Way was immediately to cut out the Part where the Wound was made; for he had seen several, who carried these hollow Scars about them, as Marks of the narrow Escape they had had, and never felt any Inconvenience afterwards.

Though Providence hath produced a Creature so terrible to other Animals, yet it seems to have provided it with the Rattle at its Tail, that the Noife thereof might give warning to them to get out of its way.

I desired an Experiment should be tried before several Physicians ; which was accordingly done in the Garden belonging to their College in *London*. The Captain, by keeping the Head fast with a forked Stick, and making a Noose, which he put about the Tail of the Snake, tied it fast to the end of another Stick wherewith he took him out of the Box, and laid him upon the Grafts-plat. Then a Dog being made to tread upon him, he bit the Dog, who thereupon howl'd very bitterly, and went away some few Yards distant from the Snake : But in about one Minute of time he grew paralytic in the hinder Legs, after the manner of Dogs who have the *Aorta descendens* tied. He died in less than three Minutes time, as is related by Mr. *Ranby*, in an Account of this Experiment in *Philos. Trans.* N° 401. pag. 377. and by Captain *Hall*, N° 399. pag. 309.

In my Opinion the whole Mystery of their enchanting or charming any Creature is chiefly this : that when such Animals as are their proper Prey, namely small Quadrupeds or Birds, &c. are surprized by them, they bite them ; and the Poison allowst them time to run a small Way, as our Dog did, or perhaps a Bird to fly up into the next Tree, where the Snakes watch them with great earnestnes, 'till they fall down, or are perfectly dead, when having lick'd them over with their Spawl or Spittle, they swallow them down, as the following Accounts relate.

“ Some People in *England* (says Colonel *Beverley*, in his History of *Virginia*, Edit. 2d. p. 260, “ *Lond.* 1722. 8°. are startled at the very Name of the “ *Rattle-Snake*, and fancy every Corner of that Province

" so much pestered with them, that a Man goes in
 " constant danger of his Life, that walks abroad in
 " the Woods. But this is as gross a Mistake, as
 " most of the other ill Reports of this Country. For
 " in the first Place, this Snake is very rarely seen; and
 " when that happens, it never does the least Mis-
 " chief, unless you offer to disturb it, and thereby
 " provoke it to bite in its own Defence. But it never
 " fails to give you fair warning, by making a Noise
 " with its Rattle, which may be heard at a conve-
 " nient Distance. For my own part, I have travel-
 " led the Country as much as any Man in it of my
 " Age, by Night and by Day, above the Inhabi-
 " tants, as well as among them: And yet before the
 " first Impression of this Book, I had never seen a
 " *Rattle-Snake* alive, and at Liberty, in all my life.
 " I had seen them indeed after they had been kill'd,
 " or pent up in Boxes to be sent to *England*. The
 " bite of this Viper, without some immediate Ap-
 " plication, is certainly Death: But Remedies are so
 " well known, that none of their Servants are igno-
 " rant of them. I never knew any kill'd by these
 " or any other of their Snakes, although I had a
 " general Knowledge all over the Country, and had
 " been in every part of it. They have several other
 " Snakes, which are seen more frequently, and have
 " very little or no hurt in them: *viz.* such as they
 " call *Black-Snakes*, *Water-Snakes*, and *Corn-*
 " *Snakes*. The black *Viper-Snake*, and the Cop-
 " per-bellied *Snake*, are said to be as venomous as the
 " *Rattle-Snake*; but they are as seldom seen. These
 " three poisonous Snakes bring forth their Young alive;
 " whereas the other three sorts lay Eggs, which are
 " hatch'd

“ hatch'd afterwards ; and that is the Distinction they
 “ make, esteeming only those to be venomous, which
 “ are viviparous. They have likewise the *Horn-Snake*,
 “ so called from a sharp Horn it carries in its Tail,
 “ with which it assaults any thing that offends it,
 “ with that Force, that, as it is said, it will strike
 “ its Tail into the But-end of a Musket, from whence
 “ it is not able to disengage itself.

“ All sorts of Snakes will charm both Birds and
 “ Squirrels, and the *Indians* pretend to charm them.
 “ several Persons have seen Squirrels run down a Tree
 “ directly into a Snake's Mouth. They have likewise
 “ seen Birds fluttering up and down, and chattering
 “ at these Snakes, 'till at last they have dropt down
 “ just before them

“ In the end of *May*, 1715, stopping at an Or-
 “ chard, by the Road-side to get some Cherries,
 “ being three of us in Company, we were entertain'd
 “ with the whole Proces of a Charm between a *Rat-*
 “ *tle-Snake* and a Hare, the Hare being better than
 “ half grown. It happen'd thus : One of the Company
 “ in his search for the best Cherries, espied the Hare
 “ sitting, and although he went close by her, she did
 “ not move, 'till he (not suspecting the Occasion of
 “ her Gentleness) gave her a Lash with his Whip.
 “ This made her run about ten Foot, and there sit
 “ down again. The Gentleman not finding the Cher-
 “ ries ripe, immediately returned the same Way, and
 “ near the Place were he struck the Hare, he spied
 “ a *Rattle-Snake*. Still not suspecting the Charm,
 “ he goes back about twenty Yards to a Hedge to get
 “ a Stick to kill the Snake, and at his return found
 “ the Snake removed and coil'd in the same Place
 “ from

" from whence he had moved the Hare. This put
 " him into immediate Thoughts of looking for the
 " Hare again, and soon spied her about ten Foot off
 " the Snake, in the same Place to which she had
 " started when he whipt her. She was now lying
 " down, but would sometimes raise herself on her
 " Fore-feet, struggling as it were for life or to get a-
 " way, but could never raise her hinder parts from the
 " Ground; and then would fall flat on her Side a-
 " gain, panting vehemently. In this Condition the
 " Hare and Snake were when he called me, and tho'
 " we all three came up within fifteen Foot of the
 " Snake to have a full View of the Whole, he took no
 " notice at all of us, nor so much as gave a Glance
 " towards us. There we stood at least half an Hour,
 " the Snake not altering a Jot, but the Hare often
 " struggling and falling on its Side again, 'till at
 " last the Hare lay still as dead for sometime: Then
 " the Snake moved out of his Coil, and slid gently
 " and smoothly on towards the Hare, his Colours at
 " that Instant being ten times more glorious and
 " shining than at other times. As the Snake moved
 " along, the Hare happen'd to fetch another Strug-
 " gle, upon which the Snake made a Stop, lying at
 " his Length, 'till the Hare had lain quiet again
 " for a short Space, and then he advanced again, 'till
 " he came up to the hinder Parts of the Hare, which
 " in all this Operation had been towards the Snake.
 " There he made a Survey all over the Hare,
 " raising part of his Body above it, then turn'd off,
 " and went to the Head and Nose of the Hare, af-
 " ter that to the Ears, took the Ears in his Mouth
 " one after the other, working each apart in his
 " Mouth

" Mouth as a Man does a Wafer to moisten it, then
 " return'd to the Nose again, and took the Face
 " into his Mouth, straining and gathering his Lips
 " sometimes by one side of his Mouth, sometimes
 " by the other. At the Shoulders he was a long Time
 " puzzled, often halting and stretching the Hare out
 " at Length, and straining forward first one side
 " of his Mouth, then the other, 'till at last he got
 " the whole Body into his Throat. Then we went
 " to him, and taking the Twist-band off from my
 " Hat, I made a Noose, and put it about is Neck.
 " This made him at length very furious; but we
 " having secured him, put him into one end of a
 " Wallet, and carried him on Horseback five Miles
 " to Mr. *John Baylor's* House, where we lodged
 " that Night, with a Design to have sent him to
 " Dr. *Cock* at *Williamsburgh*, but Mr. *Baylor*
 " was so careful of his Slaves that he would not let
 " him be put into his Boat, for fear he should get
 " loose and mischief them. Therefore the next
 " Morning we killed him, and took the Hare out of
 " his Belly. The Head of the Hare began to be
 " digested, and the Hair falling off, having lain a-
 " bout eighteen Hours in the Snake's Belly.

" I thought this Account of such a Curiosity
 " would be acceptable, and the rather because tho'
 " I live in a Country where such things are said
 " frequently to happen, yet I never could have any
 " satisfactory Account of a Charm, though I have
 " met with several Persons who have pretended to
 " have seen them. Some also pretend that those sort
 " of Snakes influence Children, and even Men and
 " Women, by their Charms. But this that I have
 " related

“ related of my own View, I aver (for the Satisfaction of the Learned) to be punctually true, without inlarging or wavering in any Respect, upon the Faith of a Christian.

“ In my Youth I was a Bear-hunting in the Woods above the Inhabitants; and having straggled from my Companions, I was entertained at my return with a Relation of a Pleasant Rencounter between a Dog and a Rattle-Snake, about a Squirrel. The Snake had got the Head and Shoulders of the Squirrel into his Mouth, which being something too large for his Throat, it took him up some time to moisten the Furr of the Squirrel with his Spawl, to make it slip down. The Dog took this Advantage, seized the hinder parts of the Squirrel, and tugg'd with all his might. The Snake on the other Side would not let go his hold for a long Time, 'till at last, fearing he might be bruised by the Dogs running away with him, he gave up his Prey to the Dog. The Dog eat the Squirrel, and felt no harm.

“ Another Curiosity concerning this Viper, which I never met with in Print, I will also relate from my own Observation.

“ Some time after my Observation of the Charron, my Waiting-Boy being sent abroad on an Errand also, took upon himself to bring home a *Rattle-Snake* in an Noose. I cut off the Head of this Snake, leaving about an Inch of the Neck with it: This I laid upon the Head of a Tobacco Hogshead, one *Stephen Lankford*, a Carpenter, now alive, being with me. Now you must note, that thete Snakes have but two Teeth, by which they con-

“ vey

" vey their Poison ; and they are placed in the upper Jaw, pretty forward in the Mouth, one on each side. These Teeth are hollow and crooked like a Cock's Spur : They are also loose or springing in the Mouth, and not fasten'd in the Jaw-bone as all the other Teeth are. The Hollow has a Vent also through by a small Hole a little below the Point of the Tooth. These two Teeth are kept lying down along the Jaw, or shut like a Spring-knife, and don't shrink up as the Talons of a Cat or Panther : They have also over them a loose thin Film or Skin of a Flesh-colour, which rises over them when they are raised ; which I take to be only at the Will of the Snake to do Injury. This Skin does not break by the Rising of the Tooth only, but keeps whole 'till the Bite is given, and then is pierced by the Tooth, by which the Poison is let out. The Head being laid upon the Hoghead, I took two little Twigs or Splinters of Sticks ; and having turn'd the Head upon its Crown, open'd the Mouth, and lifted up the Fang or Springing-Tooth on one side several times ; in doing of which I at last broke the Skin. The Head gave a sudden Champ with its Mouth, breaking from my Sticks ; in which I observed that the Poison ran down in a Lump like Oil, round the Root of the Tooth. Then I turned the other side of the Head, and resolv'd to be more careful to keep the Mouth open on the like Occasion, and observe more narrowly the Consequence. For it is to be observed, that though the Heads of Snakes, Terrapins [*a fort of Tortoise*] and such like Vermin be cut off, yet the Body

" will not die in a long Time after, the general Saying is, 'till the Sun Sets. After opening the Mouth on the other Side, and lifting up that Fang also several times, he endeavoured to give another Bite or Champ. But I kept his Mouth open, and the Tooth pierced the Filin, and emitted a Stream like one full of Blood, in Blood-letting, and cast some Drops upon the Sleeve of the Carpenter's Shirt, who had no Wastec coat on. I advised him to pull off his Shirt, but he would not, and received no harm; and though nothing could then be seen of it upon the Shirt, yet in washing there appear'd five green Specks, which every washing appear'd plainer and plainer, and lasted so long as the Shirt did, which the Carpenter told me was about three Years after. The Head we threw afterwards down upon the Ground, and a Sow came and eat it before our Faces, and received no harm. Now I believe, had this Poison lighted upon any place of the Carpenter's Skin, that was scratched or hurt, it might have poisoned him. I take the Poison to rest in a small Bag or Receptacle in the Hollow at the Root of these Teeth, but I never had the Opportunity afterwards to make a farther Discovery of that.

" I will likewise give you a Story of the violent Effects of this sort of Poison, because I depend on the Truth of it, having it from an Acquaintance of mine of good Credit, one Colonel *James Taylor* of *Metapony*, still alive. He being with others in the Woods a Surveying, just as they were standing to light their Pipes, they found a *Rattle-Snake*, and cut off his Head, and about three Inches of the Body.

“ Body. Then with a green Stick, which he had in
 “ his Hand, about a Foot an half long, the Bark be-
 “ ing newly peel’d off, urged and provoked the Head,
 “ ’till it bit the Stick in fury several times. Upon this
 “ the Colonel observed small green Streaks to rise up
 “ along the Stick towards his Hand. He threw the
 “ Stick upon the Ground, and in a quarter of an
 “ Hour, the Stick of its own accord split into seve-
 “ ral Pieces, and fell asunder from end to end. This
 “ Account I had from him again at the Writing
 “ hereof.” [Beverley’s History of Virginia, from
 pag. 260, to 267.]

Father *Labat* likewise tells us (in his *Nouveau Voyage aux Isles de l’ Amerique*, Tom. IV. pag. 96, and 106. Ed. Paris, 1722. in 8°.) that Serpents, when they bite their Prey, retire, to avoid being hurt by them; and when dead, cover them with their Spittle, extend their Feet along their Sides and Tails, if Quadrupeds, and then swallow them.

II. *Part of a Letter from Dr. Richardson,
 F. R. S. to Sir Hans Sloane, Bart. President
 of the Royal Society, and Colleg. Physic.
 concerning the Squilla aquæ dulcis.*

I Have met with very little of late in Natural History worth mentioning to you. One Thing I cannot omit, which I do not remember is taken notice of by any Naturalist; that is, the great Destruction that is made amongst the small Fry of Fish by the *Squilla aquæ dulcis*, which abound in most